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EXAMINER

PHAM, HUNG Q

ART UNIT PAPER NUMBER

2172

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/771,143

Applicant(s)

CRIM ET AL.

Examiner

HUNG Q PHAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32, 35 and 36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32, 35 and 36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicants canceled claims 33-34, added claims 35-36. The pending claims are 1-32 and 35-36. Applicant's arguments with respect to claims 1, 11, 16 and 28 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. **Claims 1-10 and 28-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Bapat et al. [USP 6,236,996 B1].**

Regarding to claims 1 and 28, Bapat teaches a method and a computer program for controlling managed objects. As shown in FIG. 14, tables 310 and 320 as in FIG. 11A are stored in a conventional DBMS 280 (Col. 25, lines 49-50). Rows 311, 312, 321, 322 of the tables 310, 320 contain management information for managed objects (Col. 25, lines 60-61). The FDN operates as the primary key to the data stored in the table and to determine which managed objects that a particular user is permitted to access or modify (Col. 19, lines 36-40). Access control for a particular user on a particular managed object is defined by a permissions table (Col. 26, lines 10-12). As shown in FIGS. 15A and 15B, a permission entry 1502, 1504 is tuples having three fields, user name, object name and operation type. The object name is the FDN for a managed object (Col. 26, lines 28-33). As seen, the FDN is *defined* in the permission table as *at least one expression associated with at least one record of said database*. When a user 300 issues an SQL command to access the DBMS 280 (Col. 22, lines 24-26, Col. 25, lines 65-67), Access Control is enforced by *evaluating* FDN as *at least one expression for said at least one record*, and *allowing access to said one record based on said evaluating of* FDN as *at least one expression* (Col. 27, line 45-Col. 28, line 26).

Regarding to claim 2, Bapat teaches all the claimed subject matters as discussed in claim 1, Bapat further discloses *at least one expression is a calculation expression that can be evaluated at least partly based on a value of at least one field of said at least one record* (Col. 26, lines 28-33).

Regarding to claim 3, Bapat teaches all the claimed subject matters as discussed in claim 1, Bapat further discloses *at least one expression is a calculation expression that can be evaluated at least partly based on at least one state variable of said database* (Col. 26, lines 28-33).

Regarding to claims 4 and 29, Bapat teaches all the claimed subject matters as discussed in claims 1 and 28, Bapat further discloses *at least one expression can be defined based on fields and state variables of said database, and wherein said evaluating operates to return only one of two possible values, one of said possible values indicating that access to said at least one record should be granted, and the other one of said possible values indicating that access to said at least one record should be denied* (Col. 26, lines 28-33, Col. 27, line 45-Col. 28, line 26).

Regarding to claim 5, Bapat teaches all the claimed subject matters as discussed in claim 1, Bapat further discloses *evaluation is performed only when a request to access said at least one record has been received* (Col. 25, line 65-Col. 26, line 7).

Regarding to claim 6, Bapat teaches all the claimed subject matters as discussed in claim 1, Bapat further discloses *defining of said at least one expression defines access privileges for a user of said database with respect to accessing one or more records of said database* (FIG. 15A and B).

Regarding to claim 7, Bapat teaches all the claimed subject matters as discussed in claim 1, Bapat further discloses *defining of said at least one expression operates to define access privileges for a user of said database with respect to at least one operation that can be performed on one or more records of said database* (FIG. 15A and B).

Regarding to claim 8, Bapat teaches all the claimed subject matters as discussed in claim 1, Bapat further discloses *defining of said expression defines access privileges for at least one user of said database with respect to access to one or more records in said database, and wherein said defining of said expression operates to define access privileges with respect to at least one operation that may be requested to be performed by said at least one user on one or more records of said database* (FIG. 15A and B).

Regarding to claims 9 and 31, Bapat teaches all the claimed subject matters as discussed in claims 8 and 28, Bapat further discloses *at least one user is assigned a password that is associated with said expression* (FIG. 15A and B).

Regarding to claims 10 and 32, Bapat teaches all the claimed subject matters as discussed in claims 1 and 28, Bapat further discloses *access to said at least one record can be for browsing, editing, or deleting of said at least one record* (FIG. 15A and B).

Regarding to claim 30, Bapat teaches all the claim subject matters as discussed in claim 28, Bapat further discloses *defining of said expression is made to define access privileges of at least one user of said database with respect to access to one or more records of said database, and wherein said defining of said expression operates to define access privileges with respect to at least one operation that may be requested to be performed by said at least one user on one or more records of said database* (FIG. 15A and B).

### **Claim Rejections - 35 USC § 103**

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**5. Claims 16-18, 23-26 and 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bapat et al. [USP 6,236,996 B1] in view of Applicant Admitted Prior Art [Background Of The Invention, pages 1-3].**

Regarding to claim 16, Bapat teaches a database system. As shown in FIG. 14 is a database having one or more records stored therein (Col. 25, lines 49-50 and 55-59). A call 440 to a create permissions procedure 442 as *a database program* is used to create the permissions tables as in FIG. 15 A-B (Col. 26, lines 19-21) *to facilitate operations on said one or more records stored in said database*. Bapat does not teach *a Graphical User Interface* is included and *Graphical User Interface operates to facilitate defining access privileges with respect to said one or more records stored in said database*. However, as disclosed in the background of the invention, to allow a user to more easily access and manage a database, a Graphical User Interface is included in the database program (Applicant Admitted Prior Art, pages 1-3). As disclosed by Bapat, the system administrator 302 creates the permissions tables prior to use of the DBMS 280 by end users. The system administrator 302 invokes a call 440 to the *Create\_Permissions\_Tables* 442 procedure of the DBMS 280 (Col. 26, lines 18-27). As seen, in order to facilitate the invoking of the call 440, a *Graphical User Interface* should be included in the database program. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to include a Graphical User Interface as admitted in the background in order to have a friendly system to define access right for a user.



Regarding to claim 17, Bapat and Applicant Admitted Prior Art teaches all the claim subject matters as discussed in claim 16, Bapat further discloses *Graphical User Interface operates to provide the ability for a user of said database to define an expression associated with at least one operation that may be requested to be performed by another user of said database on said one or more records stored in said database* (FIG. 15 A-B, Col. 26, lines 18-50).

Regarding to claim 18, Bapat and Applicant Admitted Prior Art teaches all the claim subject matters as discussed in claim 16, Bapat further discloses *Graphical User Interface operates to provide the ability for a user to define said expression without requiring said user to write a programming script* (Col. 26, lines 18-50).

Regarding to claim 23, Bapat and Applicant Admitted Prior Art teaches all the claim subject matters as discussed in claim 16, Bapat further discloses *database program operates to determine whether access to at least one of said one or more records should be granted or denied* (Col. 27, line 45-Col. 28, line 26).

Regarding to claim 24, Bapat and Applicant Admitted Prior Art teaches all the claim subject matters as discussed in claim 23, Bapat further discloses the step of *determining of whether access to said at least one record should be granted or denied is*

*performed by evaluating a calculation expression for said at least one of said one record* (Col. 27, line 45-Col. 28, line 26).

Regarding to claim 25, Bapat and Applicant Admitted Prior Art teaches all the claim subject matters as discussed in claim 24, Bapat further discloses *access to said at least one record is granted only when said determining determines that access should be granted, and wherein access to said at least one record is denied when said determining determines that access should be denied for said record* (Col. 27, line 45-Col. 28, line 26).

Regarding to claim 26, Bapat and Applicant Admitted Prior Art teaches all the claim subject matters as discussed in claim 24, Bapat further discloses *access to said at least one record can be for browsing, editing, or deleting of said record* (FIG. 15A).

Regarding to claim 35, Bapat teaches a database program. As shown in FIG. 14 is a database having one or more records stored therein (Col. 25, lines 49-50 and 55-59). A call 440 to a create permissions procedure 442 as *a database program* is used to create the permissions tables as in FIG. 15 A-B (Col. 26, lines 19-21) to control *operations on said one or more records stored in said database, and to defining access privilege for at least one record, based on an expression which is defined for said least one record, said expression defining access privilege for said at least one record which is stored or is to be created in said database*. Bapat does not teach *a Graphical User Interface* is included to facilitate the database program. However, as disclosed in the background of

the invention, to allow a user to more easily access and manage a database, a Graphical User Interface is included in the database program (Applicant Admitted Prior Art, pages 1-3). As disclosed by Bapat, the system administrator 302 creates the permissions tables prior to use of the DBMS 280 by end users. The system administrator 302 invokes a call 440 to the *Create\_Permissions\_Tables* 442 procedure of the DBMS 280 (Col. 26, lines 18-27). As seen, in order to facilitate the invoking of the call 440, a *Graphical User Interface* should be included in the database program. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to include a Graphical User Interface as admitted in the background in order to have a friendly system to define access right for a user.

Regarding to claim 36, Bapat and Applicant Admitted Prior Art teaches all the claim subject matters as discussed in claim 35, Bapat further discloses *database program further operates to evaluate said expression in order to determine whether access to said at least one record should be granted* (Col. 27, line 45-Col. 28, line 26).

**6. Claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bapat et al. [USP 6,236,996 B1] in view of Elmasri et al. [Fundamentals of Database System].**

Regarding to claim 11, Bapat teaches a method for controlling managed objects. As shown in FIG. 14, tables 310 and 320 as in FIG. 11A are stored in a conventional

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DBMS 280 (Col. 25, lines 49-50). Rows 311, 312, 321, 322 of the tables 310, 320 contain management information for managed objects (Col. 25, lines 60-61). The FDN operates as the primary key to the data stored in the table and to determine which managed objects that a particular user is permitted to access or modify (Col. 19, lines 36-40). Access control for a particular user on a particular managed object is defined by a permissions table (Col. 26, lines 10-12). As shown in FIGS. 15A and 15B, a permission entry 1502, 1504 is tuples having three fields, user name, object name and operation type. The object name is the FDN for a managed object (Col. 26, lines 28-33). As seen, each permission entry is *defined* in the permission table as *a calculation expression for a user name, said calculation expression defining access privileges of said one or more users with respect to at least one operation that may be requested to be performed by said one or more users on one or more records of said database*. When a user 300 issues an SQL command to access the DBMS 280 (Col. 22, lines 24-26, Col. 25, lines 65-67) for the status of all routers in the network or for information about a specified list of managed objects (Col. 28, lines 27-30) as *receiving a request to perform said at least one operation on one or more records of said database, said request being identified as a request made by said one or more users associated with user name*. Access Control is enforced by *evaluating user name, object name and operation type as said calculation expression when said request has been received; said evaluation returning only one of two possible values, one of said possible values indicating that said at least one operation should be granted and another one of said possible values indicating that said at least one operation should be denied; granting said at least one operation to be performed when said evaluation returns one*

*said possible value to indicate that said at least one operation should be granted; and denying said at least one operation to be performed when said evaluation returns one said another possible value to indicate that said at least one operation should be denied* (Col. 27, line 45-Col. 28, line 26). Elmasri teaches a method of protecting access to a database system by *identifying a password that is associated with one or more users of said database* (Elmasri, page 718). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Bapat method by using a password to identify a user as taught by Elmasri in order to have a more secure database system.

Regarding to claim 12, Bapat and Elmasri teaches all the claimed subject matters as discussed in claim 11, Bapat further discloses *at least one operation can be a browse, an edit, or a delete operation* (FIG. 15A and B).

Regarding to claim 13, Bapat and Elmasri teaches all the claim subject matters as discussed in claim 11, Bapat further discloses *calculation expression is not explicitly defined for said at least one operation but said calculation expression is one that has been defined for another operation which has been considered as a related operation to said at least one operation* (FIG. 15A).

Regarding to claim 14, Bapat and Elmasri teaches all the claim subject matters as discussed in claim 11, Bapat further discloses *calculation expression can be evaluated at least partly based on a value of at least one field of said at least one record, and wherein*

*said calculation expression can be evaluated at least partly based on at least one state variable of said database* (Col. 26, lines 28-33).

Regarding to claim 15, Bapat and Elmasri teaches all the claim subject matters as discussed in claim 14, Bapat further discloses the step of *granting temporary or limited access to said at least one record to allow said evaluating of said calculation expression* (FIG. 15A).

**7. Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bapat et al. [USP 6,236,996 B1] in view of Applicant Admitted Prior Art [Background Of The Invention, pages 1-3] and Elmasri et al. [Fundamentals of Database System].**

Regarding to claim 19, Bapat and Applicant Admitted Prior Art teaches all the claim subject matters as discussed in claim 16, Bapat fails to teach *Graphical User Interface provides a window that allows a user to interact with said Graphical User Interface to identify a password for which access privileges may be defined or re-defined*. Elmasri teaches a method of protecting access to a database system by identifying a password that is associated with one or more users of said database (Elmasri, page 718). In the teaching of creating the permission table (Col. 26, lines 16-50), a Graphical User Interface provides a window is implied. In FIG. 15A, a user name is identified by system administrator and the user access right is mapped to the table by

*Create\_Permissions\_Tables* procedure. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Bapat and Applicant Admitted Prior Art method by using a Graphical User Interface to identify a password instead of user name in order to define access privilege for a user.

Regarding to claim 20, Bapat, Applicant Admitted Prior Art and Elmasri teaches all the claim subject matters as discussed in claim 19, Bapat further discloses *Graphical User Interface further provides a window that allows a user to specify a calculation expression which defines access privileges with respect to at least one operation that may be requested to be performed on said one or more records* (Col. 26, lines 28-33).

Regarding to claim 21, Bapat, Applicant Admitted Prior Art and Elmasri teaches all the claim subject matters as discussed in claim 20, Bapat further discloses *at least one operation can be a browse, edit, or a delete operation* (FIG. 15A).

Regarding to claim 22, Bapat, Applicant Admitted Prior Art and Elmasri teaches all the claim subject matters as discussed in claim 20, Bapat further discloses *calculation expression can be evaluated at least partly based on a value in at least one field of said one or more records of said database, and wherein said calculation expression can be evaluated at least partly based on at least one state variable of said database* (Col. 26, lines 28-33).

**8. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bapat et al. [USP 6,236,996 B1] in view of Applicant Admitted Prior Art [Background Of The Invention, pages 1-3] and Gorelik et al. [USP 6,651,067 B1].**

Regarding to claim 27, Bapat and Applicant Admitted Prior Art teaches all the claimed subject matters as discussed in claim 24, but fails to disclose *the database further comprises a cache, and wherein said cache operates to store an evaluated result of at least one calculation expression*. Gorelik teaches a database comprises a cache, and cache operates to store an evaluated result (Gorelik, FIG. 3). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Bapat and Applicant Admitted Prior Art system by including a cache and store the result in cache as taught by Gorelik in order to speed up the retrieval process.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG Q PHAM whose telephone number is 703-605-4242. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BREENE can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.



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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Examiner Hung Pham  
December 15, 2003

  
SHAHID ALAM  
PRIMARY EXAMINER